

Software Releases



sugar



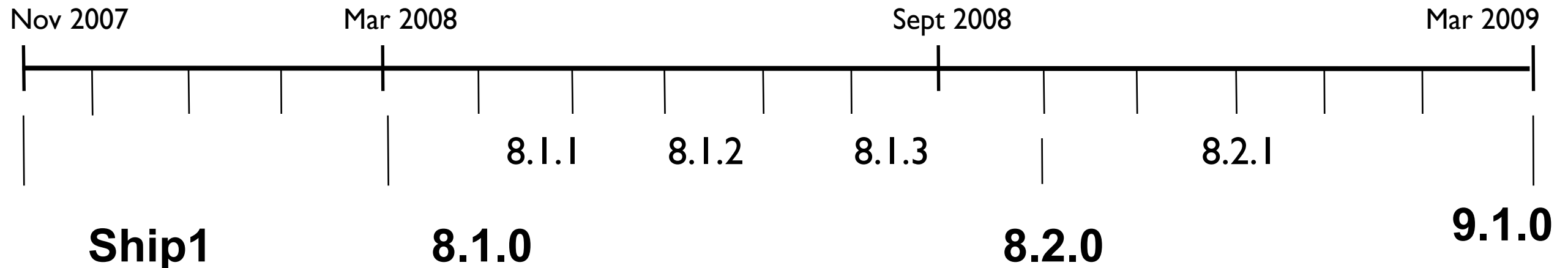
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Open Source?

Open Source doesn't just mean Free!

1. Free Redistribution
 2. Source Code
 3. Derived Works
 4. Integrity of The Author's Source Code
 5. No Discrimination Against Persons or Groups
 6. No Discrimination Against Fields of Endeavor
 7. Distribution of License
 8. License Must Not Be Specific to a Product
 9. License Must Not Restrict Other Software
 10. License Must Be Technology-Neutral
- Open Source Initiative, <http://opensource.org/docs/osd>

Software Releases



- 8.2.0 – New languages, Activity updater, Backup to XS, Longer battery life. (Fedora standard desktop to complement this release)
 - Fedora desktop available this fall
- 9.1.0 – Fedora (RedHat) Community takes ownership of release process. OLPC works with Fedora to address any unique software needs for the XO.

* Dates and feature sets of future releases subject to change

Security

- Available today:
 - Anti-theft of the delivery chain (one time activation)
 - Signed software (both OFW and OS)
 - Activities isolated from filesystem
- Future:
 - Activation lease management (time-limited)
 - Activity isolation from network

Broader OS Support

- Boot Sugar or alternative operating system
- SD card or USB boot support built in
- Provide users OS options beyond standard Sugar
- Two current OLPC activities
 - Fedora standard desktop support
 - Debian standard desktop support
- Community members working on Ubuntu, Debian, and other systems
- Reinforces XO position as general-purpose, versatile hardware platform

Deployment Planning

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Planning for Deployments

- Planning in advance
 - Establish Country Team
 - Imaging and Choosing Content
 - Protocol for End User Support
- Deployment Guide
 - http://wiki.laptop.org/go/Deployment_Guide
 - http://wiki.laptop.org/go/Deployment_Guide/Workbook

Connectivity and Collaboration

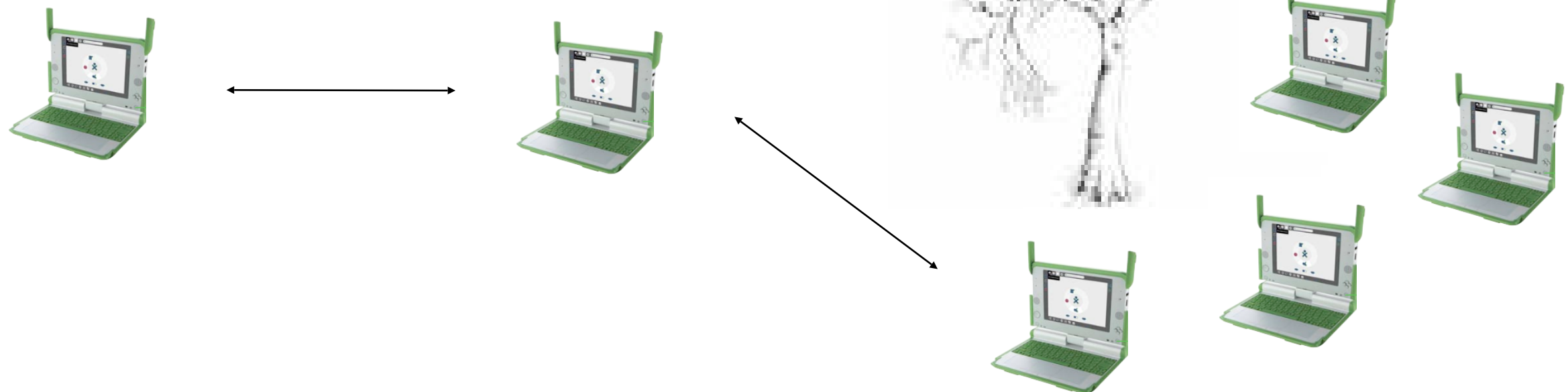
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Connectivity

- Network
 - Infrastructure: Wired/Wireless
 - RF Environment
 - Scale: Number of XO's in class and school

XO under a tree

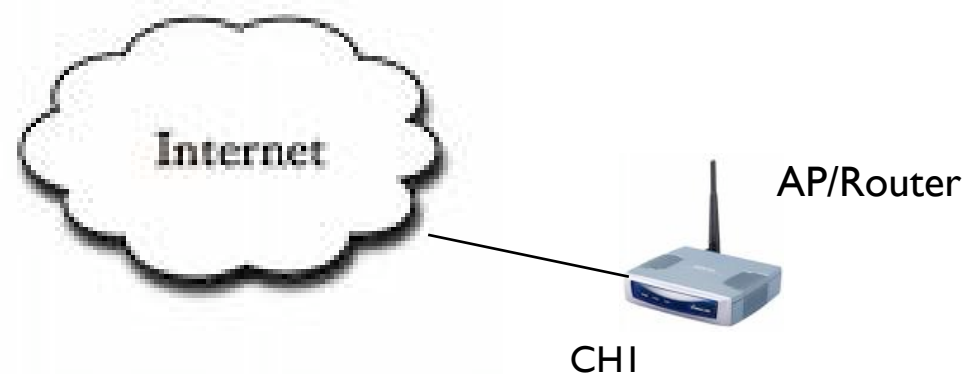
Up to 10 laptops per
mesh channel (3 channels)
can collaborate with no
wireless infrastructure



XO with AP

Up to 20 Laptops / Access Point

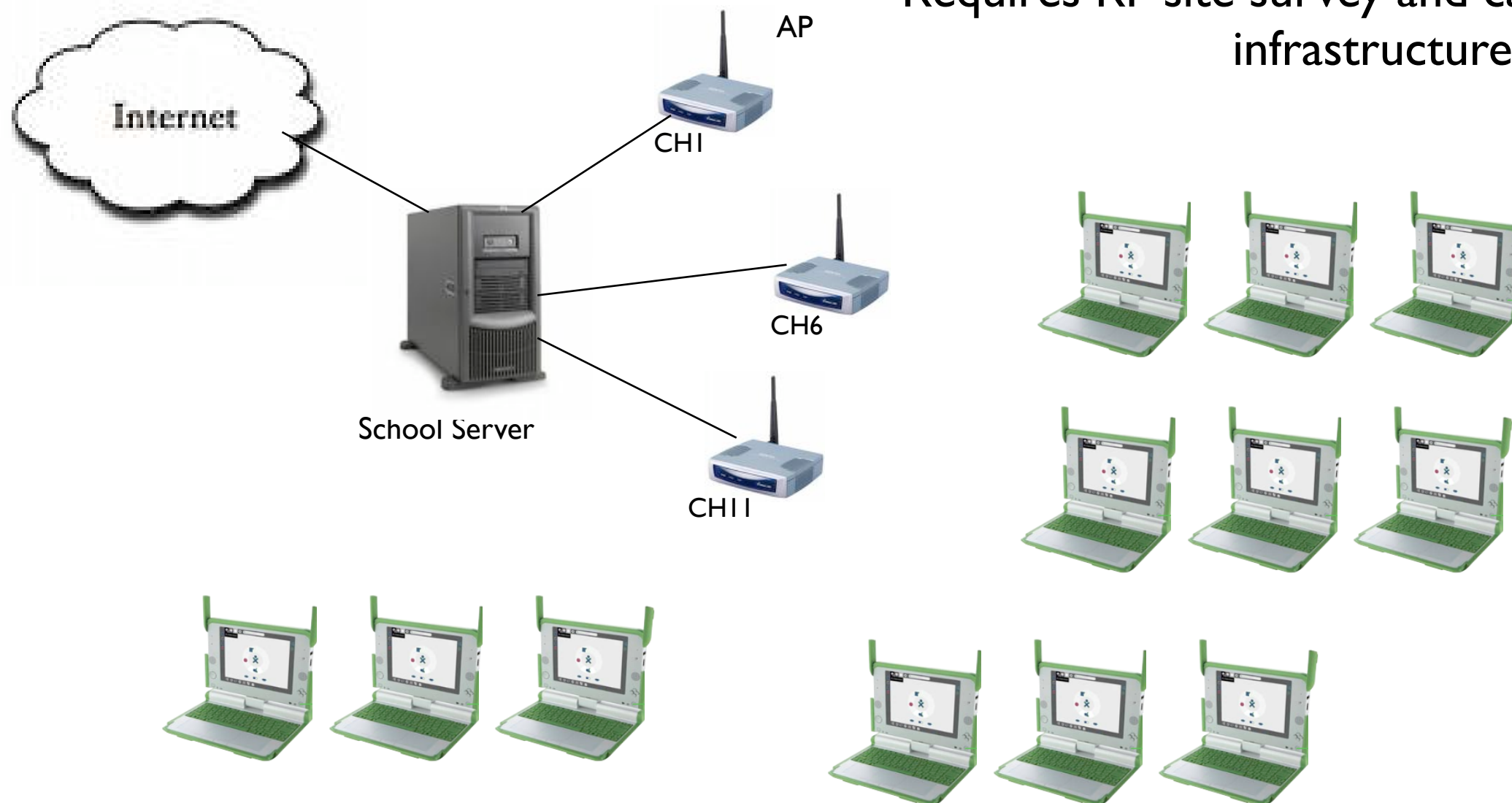
More than 60 laptops and 3 Access Points requires site survey
and carefully designed infrastructure



XO with XS Server

Up to 30-40 laptops per AP

Up to 300 laptops per school server.
Requires RF site survey and carefully designed infrastructure



Connectivity/Collaboration

- Connectivity with other XO's and Internet:
 - Simple mesh, up to 10
 - 802.11b/g - via infrastructure access point, up to 20 XO's
 - With ejabberd on school server, 30-40 laptops per access point
- Collaboration, typical session <1 hour:
 - Chat, 30-40 laptops can share a chat
 - Write, 2-3 laptops can collaborate on a Write document
 - Record, 8-10 laptops can share Record photos (sharing video is not supported)
 - Browse, 30-40 laptops can share Browse link

Support Models

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Technology-Planning Phase

- Activities and Content
 - Choose and Test
 - Translate
 - Language and Keyboard
- Power
 - What is available in Schools
 - Equipment for Charging
- Deployment Workbook
 - http://wiki.laptop.org/go/Deployment_Guide/Workbook

Deployment Workbook

Example #3: Large school				
Number of laptops in the school:		500	teachers and students	
Suggested Infrastructure				
Number of Servers:		1	large server	
Number of Access Points:		7		
Number of Switches:		2		
Power requirements per school				
		Peak	Per Day	
Laptops		4.80 kW, or	16.0 kWh	
Laptops (assuming XO power adapters)		7.38 kVA, or	24.6 kVAh	
Servers		0.12 kVA, or	0.72 kVAh	
Networking		0.11 kVA, or	0.63 kVAh	
Peak power draw at this school		7.6 kiloVA		
Power per day required by this school		26.0 kiloVA hours		
Server				
Processor		> 2 GHz x86 compatible		
Minimum Memory (DRAM)		1 GiByte per server		
Minimum Disk Storage		1536 GiByte per server		

Technology Roll-out Phase

- Installation and Upgrade
 - Be ready to upgrade and image all XO's
 - USB Upgrades
- Plan for upgrades after deployed
 - School Server
 - WAN
 - USB Drive

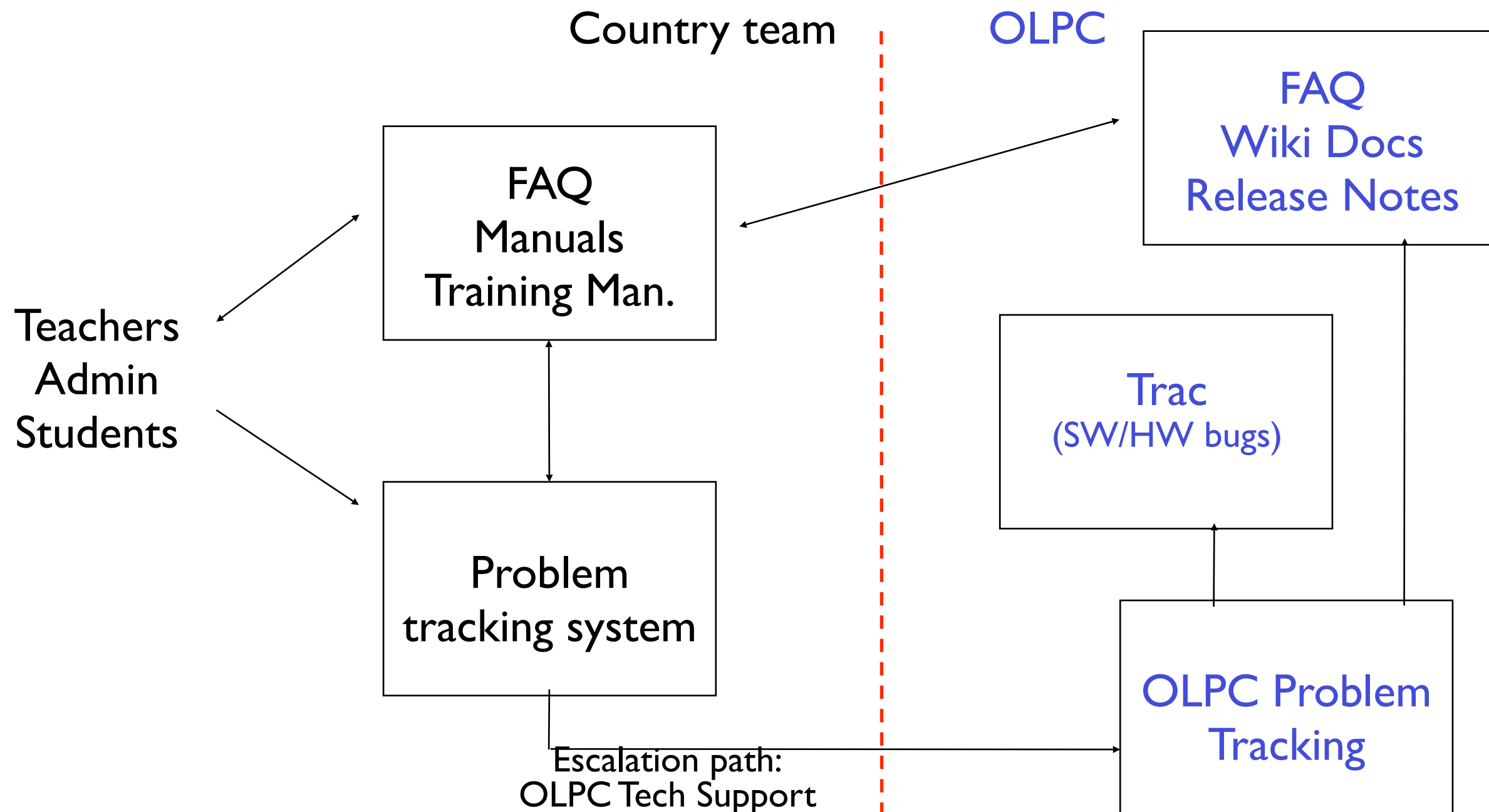
Security

- Pre-Activated Laptops:
 - No keys required, no process needed
 - Arrive in default condition; countries must specify need for Anti-theft
- Un-Activated Laptops: Anti-theft in Delivery
 - Recommended for >5000 laptops
 - Activation keys required
 - Deployment tech contacts must obtain activation keys and learn process
 - Important planning required at warehouse and at activation point

Technology-Ongoing Phase

- Post-Installation Support
 - Help establish and train for local repair centers
 - Provide contacts, process, pricing for ordering spare parts
 - Provide appropriate sysadmin, teacher training:
 - Connectivity, Networking
 - Upgrades, Backups, Power issues
 - Development, test and community groups
 - Problem tracking DB
 - Escalation system for OLPC bugs

Escalation for problem tracking



Tech Support - Countries

- Country's Role for Tech Support
 - Create localized FAQ (based on OLPC FAQ)
 - Create Network/IT documentation for country specific needs
 - Build a database for deployment and for problem tracking
 - Track which laptop goes to which school
 - Track laptops that have hw and sw problems
 - Keep records of problems/resolutions to build knowledge base
 - Provide local teachers/administrators with info on how to track problems
 - E-Mail to OLPC for problems not resolved locally

Tech Support - Countries

- OLPC Role for Tech Support
 - Provide repair center ideas, guidelines, troubleshooting manuals and information
 - Encourage use of problem tickets, local help centers, FAQ, documentation of work
 - Encourage the use of volunteers and local open source development resources
 - Provide information on customizing activities and content; localization
 - Provide an Escalation path to OLPC and Open Source communities

Hardware Support

- Warranty
 - Additional 1% shipped at no charge to cover 90 day breakage warranty
 - Use DOA (Dead on Arrival) XOs to seed spare parts for Repair Centers
- Escalation
 - Contact OLPC if $> 1\%$ failure rate.
 - i.e. previous batteries that did not charge

Hardware Support

- Repairs
 - OLPC supplies troubleshooting documentation (English)
 - http://wiki.laptop.org/go/XO_Troubleshooting_Guide
 - Country supplies local repair center
 - Student Workers
 - Volunteers
 - Encourage Small Business
- Spare Parts
 - Large Deployments: >10,000 XOs direct contact with manufacturer, i.e. batteries, displays, etc..
 - Smaller Deployments: work with OLPC/Brightstar for orders.

Software Support

- Open source software
 - Allows/encourages contributions from many sources
 - No proprietary or licensing issues
 - No formal support programs
 - <http://lists.laptop.org>
 - <http://wiki.laptop.org>
 - <http://fedoraproject.org/wiki/Communicate>

Questions?

- Contact me: reuben@laptop.org